

CLAIMS

What is claimed is:

- 5 1. A method for expanding the functionality of a content receiver comprising
the steps of:
receiving a command from a downstream content receiver; and
executing the command if the command is not directed to a server
further upstream.
- 10 2. The method of Claim 1 further comprising the step of directing an
unexecuted command to a server further upstream.
- 15 3. The method of Claim 2 wherein the step of directing an unexecuted
command to a server further upstream comprises the steps of:
receiving data packets addressed to an upstream augmentation unit ;
generating a modulated carrier signal according to the data packets;
and
conveying the modulated carrier signal to an upstream interface.
- 20 4. The method of Claim 1 further comprising the step of configuring a
downstream content receiver to forward user commands upstream if the
downstream content receiver had not been previously configured to do so.
- 25 5. The method of Claim 4 wherein the step of configuring a downstream
content receiver comprises the steps of:
installing a firmware patch into the downstream content receiver that
minimally causes a processor in the downstream content receiver to:
fragment an unexecuted command into one or more data
30 packets;

generate a modulated carrier signal according to the data
packets; and
convey the modulated carrier signal an upstream augmentation
unit.

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6. The method of Claim 1 wherein the step of receiving a command from a downstream content receiver comprises the steps of:
- receiving a data packet from a downstream interface according to a delivery address;
 - 10 associating the data packet with a network message; and
 - directing a network message to a command parser that executes a command contained in the network message.
7. The method of Claim 6 wherein the step of receiving a data packet from a downstream interface comprises the steps of:
- 15 receiving a modulated carrier signal;
 - extracting a digital bit stream from the modulated carrier; and
 - framing the bit stream into data packets.
8. The method of Claim 1 wherein the command received is a record command and the step of executing the command comprises the steps of:
- 20 receiving a content stream from an upstream signal source; and
 - recording the content stream.
9. The method of Claim 1 wherein the command received is a play command and the step of executing the command comprises the steps of:
- 25 determining what content is requested for play;
 - retrieving the requested content; and
 - directing the retrieved content to the downstream content receiver.

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10. The method of Claim 9 wherein the step of directing the retrieved content to the downstream content receiver comprises the steps of:
modulating a carrier signal according to the content stream;
combining the modulated carrier signal with a multiple carrier signal; and
5 conveying the combined signal to the downstream content receiver.
11. The method of Claim 9 wherein the step of directing the retrieved content to the downstream content receiver comprises the steps of:
modulating a carrier signal according to the content stream; and
10 conveying the modulated carrier signal to the downstream content receiver in lieu of a multiple carrier signal.
12. A content receiver augmentation unit comprising:
downstream interface; and
15 command executive that receives a command from the downstream interface and executes the command if the command is not directed to a server further upstream.
13. The content receiver augmentation unit of Claim 12 further comprises an
20 upstream interface and wherein the command executive comprises a command forwarding unit that directs unexecuted commands to the upstream interface.
14. The content receiver augmentation unit of Claim 13 wherein the command
25 forwarding unit receives data packets addressed to an upstream augmentation unit and directs these to the upstream interface and wherein the upstream interface comprises:
modulator that generates a modulated carrier signal according to the data packets; and
30 multiplexing filter capable of directing the modulated carrier into an upstream path.

15. The content receiver augmentation unit of Claim 12 further comprising a
content receiver initiation unit that configures a downstream content
receiver to forward commands if the downstream content receiver has not
5 been previously configured to do so.
16. The content receiver augmentation unit of Claim 15 wherein the content
receiver initiation unit configures a downstream content receiver by:
installing a firmware patch into the content receiver that minimally
10 causes a processor in the content receiver to:
fragment an unexecuted command into one or more data
packets;
generate a modulated carrier signal according to the data
packets; and
15 convey the modulated carrier signal to an upstream
augmentation unit.
17. The content receiver augmentation unit of Claim 13 wherein the
downstream interface comprises:
20 data packet receiver that receives data packets according to a delivery
address; and
message assembly unit that assembles one or more received data
packets into a network message and wherein the command executive
comprises a command parser that receives the network message and
25 executes a command contained therein.
18. The content receiver augmentation unit of Claim 17 wherein the data
packet receiver comprises:
demodulator that generates a digital bit stream according to a
30 modulated carrier; and

data packet framer that generates data according to the digital bit stream.

19. The content receiver augmentation unit of Claim 12 further comprising a
5 content storage unit and wherein the upstream interface comprises a content receiver that is capable of receiving a content stream from an upstream source and directs said content stream to the content storage unit if the command executive receives a record command.

10 20. The content receiver augmentation unit of Claim 12 further comprising a content storage unit wherein the command executive directs the content storage unit to direct a content stream to the downstream interface according to a received command if said received command is a play command.

15 21. The content receiver augmentation unit of Claim 20 wherein the downstream interface comprises:
modulator that generates a modulated signal according to a content stream; and
20 signal combiner capable of combining the modulated signal with a multiple carrier signal.

22. The content receiver augmentation unit of Claim 20 wherein the downstream interface comprises:
25 modulator that generates a modulated signal according to a content stream; and
signal selector capable of selecting the modulated signal in lieu of a multiple carrier signal.

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